

Amendments to the Specification:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Previously presented) A method of generating a protein array, the method comprising:
 - (a) inserting a marker DNA sequence in frame immediately following a start codon of each of a plurality of target DNA sequences or immediately preceding a stop codon of each of a plurality of target DNA sequences or both, to form a plurality of modified DNA sequences which encode a plurality of modified amino acid sequences each comprising a marker moiety;
 - (b) expressing the plurality of modified amino acid sequences from the plurality of modified DNA sequences;
 - (c) bringing the plurality of modified amino acid sequences into contact with a solid support wherein the marker moiety of the plurality of modified amino acid sequences is able to attach to the solid support, thereby generating a protein array, and
 - (d) washing said solid support to remove unbound proteins.
2. (Previously presented) The method as claimed in claim 1 wherein the marker moiety is a peptide sequence selected from the group consisting of:
 - (a) a histidine tag;
 - (b) a complete protein or protein domain; and
 - (c) a maltose binding protein domain.
3. (Previously presented) The method as claimed in claim 1 wherein the marker moiety allows for purification of the individual proteins in the array.
4. (Previously presented) The method of claim 1 wherein the marker DNA sequence is inserted such that the start or stop codon for each of the proteins is replaced.

5-7. (Canceled)

8-12. (Withdrawn)

13. (Previously presented) A method of generating an antibody array which comprises

(a) bringing a protein array, made according to any one of claims 1 to 4, into contact with an antibody library, such that one or more proteins in the protein array bind to at least one antibody in the antibody library;

(b) removing any unbound antibodies; and

(c) immobilisation of those antibodies bound to proteins in the protein array.

14. (Withdrawn)

15. (Canceled)

16. (Previously presented) The method of claim 1 wherein the marker DNA sequence is inserted immediately preceding a stop codon of a target DNA sequence by:

(a) digesting the target DNA sequence such that it has a 5' overhang wherein the stop codon is comprised in the first three nucleotides counting from the 3' side of the overhang;

(b) annealing the marker DNA sequence to the overhang wherein the marker DNA sequence comprises a sequence complementary to the first four nucleotides of the overhang counting from the 3' side;

(c) ligating the marker DNA sequence to the target DNA sequence.

17. (Previously presented) The method of claim 1 wherein the marker DNA sequence is inserted immediately following a start codon of a target DNA sequence by;

(a) digesting the target DNA sequence such that it has a 5' overhang wherein the start codon is comprised in the first three nucleotides counting from the 3' side of the overhang;

(b) annealing the marker DNA sequence to the overhang wherein the marker DNA sequence comprises a sequence complementary to the first four nucleotides of the overhang counting from the 3' side;

(c) ligating the marker DNA sequence to the target DNA sequence.

18. (Previously presented) The method of any one of claims 1 to 4 wherein the protein array comprises serine proteases, kinases or p450 enzymes.

19. (Previously presented) The method of any one of claims 1 to 4 wherein said plurality of modified amino acid sequences are modified human amino acid sequences.

20. (Previously presented) The method of claim 1 wherein the marker moiety is selected from the group consisting of FLAG and Strep.

21. (Previously presented) The method of claim 1 or 2 wherein the marker moiety is post-translationally modified.

22. (Previously presented) The method of claim 21 wherein the post-translational modification comprises the addition of a biotin or a lipid molecule.

23. (Previously presented) The method of claim 1 wherein said modified amino acid sequences are folded into the correct conformation.

24. (Previously presented) The method of claim 1 wherein said inserting step inserts a marker DNA sequence in frame immediately following a start codon of each plurality target DNA sequence and immediately preceding a stop codon of each of a plurality of target DNA sequences, to form a plurality of modified DNA sequences which encode a plurality of modified amino acid sequences each comprising two marker moieties.

25. (Withdrawn)

26. (Currently amended) A method of screening for antibodies which recognize each protein in the array, the method comprising:

(a) contacting the antibodies with a spatially defined array comprising a plurality of array bound proteins produced according to any one of claims 1-4, with each array bound protein being at a different position on a solid support, wherein the plurality of array bound proteins comprises a plurality of different proteins expressed in a single species; and

(b) detecting any interaction between the array bound proteins and the antibodies.

27. (New) The method of claim 1, wherein the marker moiety provides a high-affinity attachment to the solid support.